

**Note to readers with disabilities:** *EHP* strives to ensure that all journal content is accessible to all readers. However, some figures and Supplemental Material published in *EHP* articles may not conform to [508 standards](#) due to the complexity of the information being presented. If you need assistance accessing journal content, please contact [ehponline@niehs.nih.gov](mailto:ehponline@niehs.nih.gov). Our staff will work with you to assess and meet your accessibility needs within 3 working days.

## **Supplemental Material**

# **Effects of Low-Dose Developmental Bisphenol A Exposure on Metabolic Parameters and Gene Expression in Male and Female Fischer 344 Rat Offspring**

Margareta H. Lejonklou, Linda Dunder, Emelie Bladin, Vendela Pettersson, Monika Rönn,  
Lars Lind, Tomas B. Waldén, and P. Monica Lind

### **Table of Contents**

Table S1. Concentration of BPA in drinking water, doses aimed for and doses consumed
Table S2. Genes analyzed with qPCR and their forward and reverse sequences
Table S3. Primer efficiency
Table S4. Weight gain, food intake, water intake, and BW for dams at PND22
Table S5. Number of pups and sex ratio
Table S6. Results for males and females combined
Table S7. Number of cells per high power field in adipose tissue
Table S8. Primary analysis: Transcriptional levels in adipose tissue and liver

## Table S1. Concentration of BPA in drinking water, doses aimed for and doses consumed

**Table S1.** Exposure of BPA, doses aimed for and actual doses that the dams consumed. Dams (F344) were given either water or bisphenol a (BPA) - 0.0025 or 0.25 mg/L.

Exposure	[C] (n=14)	[0.5] (n=11)	[50] (n=9)
Dose in drinking water	0	0.0025 mg/L	0.25 mg/L
Dose aimed for	0	0.5 µg/kg bw/day	50 µg/kg bw/day
Actual dose (GD3.5-PND22)	0	0.404 µg/kg bw/day	40.1 µg/kg bw/day
Actual dose (GD3.5-till birth)	0	0.272 µg/kg bw/day	26.9 µg/kg bw/day
Actual dose (birth-PND22)	0	0.530 µg/kg bw/day	52.7 µg/kg bw/day

Note: Pups of one [0.5] dam was transferred to other [0.5] dams at PND4. [C]: Control, [0.5]: 0.5 µg BPA/kg bodyweight/day, [50]: 50 µg BPA/kg bodyweight/day, GD: Gestational day, PND: Postnatal day.

## Table S2. Genes analyzed with qPCR and their forward and reverse sequences

**Table S2.** Genes analyzed in adipose and liver, or only adipose tissue using qPCR and their forward and reverse sequences.

Gene	Forward sequence	Reverse sequence	Tissue measured in	Main gene function
<i>ACC</i>	TCCCGGAGCTACTCTTAAAAAATG	CCCCAACGCCACATG	Iwat, gWAT, Liver, iscpBAT	Lipogenesis
<i>Adiponectin</i>	TGGTCACAATGGGATACCG	CCCTTAGGACCAAGAACACCT	Iwat, Gwat, iscpBAT	Hormonal signaling
<i>AdipoR1</i>	AGCACCGGCAGACAAGAG	CCCTTAGGACCAAGAACACCT	iWAT, gWAT, iscpBAT	Hormonal signaling
<i>AdipoR2</i>	ATGTTTGCCACCCCTCAGT	GATTCCACTCAGACCCAAGC	iWAT, gWAT, Liver, iscpBAT	Hormonal signaling
<i>Ahr</i>	CTTCAGATGCCGGCTGAG	CCTCCCTTGGAATTCATTG	iWAT	Hormonal signaling
<i>CEBP-<math>\alpha</math></i>	AGTTGACCAGTGACAATGACCG	TCAGGCAGCTGGCGGAAGAT	iWAT, gWAT, Liver, iscpBAT	Pro-lipogenic TF
<i>ESR<math>\alpha</math></i>	GATGGGCTTATTGACCAACC	TGGAGATTCAAGTCCCCAAA	iWAT	Hormonal signaling
<i>FABP4</i>	AATGTGCGACGCCTTTGT	TGATGATCAAGTTGGGCTTG	iscpBAT	Fatty acid transport

<i>FABP1</i>	CCTCTCCGGCAAGTACCAAG	CGCAGCCGCAAATGC	Liver	Fatty acid transport
<i>FASN</i>	CTCTGGAAGTGCATGCTGTAAGA	GGTAGATGTCATTTGCGAAAGGT	gWAT, Liver	De novo lipogenesis
<i>GATA2</i>	AATCGGCCGCTCATCAAG	TCGTCTGACAATTTGCACAACA	iWAT, gWAT, Liver, iscpBAT	Anti-adipogenic TF
<i>GPB1</i>	TTCATCAACCTGGCAGCGGCTG	TGCAGAGCACGGCGATATCGT	iWAT, gWAT	Hormonal signaling
<i>IGF1</i>	TCAGTTCGTGTGTGGACCAG	TCACAGCTCCGGAAGCAAC	iWAT	Hormonal signaling
<i>Leptin</i>	GGTGGCTGGTTTGTCTCTGT	TATGTGGCTGCAGAGGTGAG	iWAT, gWAT, iscpBAT	Hormonal signaling
<i>LPL</i>	CAGAGAAGGGGCTTGGAGAT	TTCATTCAGCAGGGAGTCAA	iWAT, gWAT, Liver, iscpBAT	Fatty acid uptake
<i>MTP</i>	ATGCAAATTGAGAGGTCCG	TTGCTTCCAGGTACCATTC	Liver	Fatty acid uptake
<i>PGC1<math>\alpha</math></i>	CTGCCATTGTTAAGACCGAGAA	AGGGACGTCTTTGTGGCTTTT	iWAT, gWAT, Liver, iscpBAT	Lipid catabolism
<i>PPAR<math>\alpha</math></i>	TGGAGTCCACGCATGTGAAG	CGCCAGCTTTAGCCGAATAG	gWAT, Liver	Lipid catabolism
<i>PPAR<math>\gamma</math></i>	CTGACCCAATGGTTGCTGATTAC	GGACGCAGGCTCTACTTTGATC	iWAT, gWAT, iscpBAT	Adipogenesis
<i>Pref1</i>	CTGCACTGACCCCATTTGTCT	TTCCCCGGTTTGTCAACA	iWAT, Liver, iscpBAT	Anti-adipogenic factor
<i>PXR</i>	TGCACACAGGTTCTGTTCTGA	GGGGTGCCTGTCCTGGATGC	iWAT	Sensor of toxins
<i>RXR<math>\alpha</math></i>	ACATGCAGATGGACAAGACG	GGGTTTGAGAGCCCCTTAGA	iWAT, gWAT	Lipogenesis

<i>SCD1</i>	CAACACCATGGCGTTCCA	GCGTGTGTCTCAGAGAACTTGTG	iWAT, gWAT, Liver, iscpBAT	Lipogenesis
<i>SREBP-1c</i>	CATCGACTACATCCGCTTCTTACA	GTCTTTCAGTGATTTGCTTTTGTGA	iWAT, gWAT, Liver, iscpBAT	Lipogenesis
<i>ThRβ</i>	CTCTGTCGTCTTTCAACCTGGAT	TGGGCGATCTGAAGACATCA	iWAT	Hormonal signaling
<i>UGT2B1</i>	GCTGCTTCCAGGAACCTG	TGAGGTCCCAACGCTGTCTT	Liver	Detoxification
<i>36B4*</i>	TTCCCACTGGCTGAAAAGGT	CGCAGCCGCAAATGC	iWAT, gWAT, Liver	Housekeeping gene
<i>Gusb*</i>	CTCTGGTGGCCTTACCTGAT	CAGACTCAGGTGTTGTCATCG	iWAT, gWAT, Liver	Housekeeping gene

\* : housekeeping gene, gWAT: Gonadal white adipose tissue, iscpBAT: interscapular brown adipose tissue, iWAT: inguinal adipose tissue, TF: Transcription factor

## Table S3. Primer efficiency

Table S3. Primer efficiency calculations

Gene	k	R <sup>2</sup>	E= 10 <sup>(-1/slope)</sup> -1
ACC	-3.3	0.999	100.7 %
Adiponectin	-3.5	0.999	94.8 %
AdipoR1	-3.3	0.999	99.1 %
AdipoR2	-3.8	0.999	97.6 %
Ahr	-3.8	0.998	82.3 %
CEBP $\alpha$	-3.7	0.998	87.8 %
ESR $\alpha$	-3.2	0.997	105.4 %
FABP4	-3.6	0.993	90.3 %
FABP1	-3.3	0.998	98.5 %
FASN	-3.4	0.988	97.7 %
GATA2	-3.5	0.999	92.2 %
GPER1	-3.0	0.992	114.5 %
IGF1	-3.3	0.997	102.6 %
Leptin	-3.6	0.995	84.5 %
LPL	-3.8	0.991	82.9 %
MTTP	-3.4	0.999	101.3 %
PGC1 $\alpha$	-3.5	1	92.7 %
PPAR $\alpha$	-3.8	0.997	83.9 %
PPAR $\gamma$	-3.4	0.995	97.2 %
Pref1	-3.1	0.994	110.7 %
PXR	-3.8	0.999	83.9 %
RXR $\alpha$	-3.6	0.985	88.2 %
SCD1	-3.8	1	84.2 %
SREBP-1C	-3.2	0.991	105.9 %
ThR $\beta$	-3.6	0.995	90.8 %
UGT2B1	-3.4	0.991	102.9 %
36B4*	-3.3	0.999	105.5 %
Gusb*	-3.4	0.999	97.1 %

Note: Primer efficiency ( $10^{(-1/-\text{slope})-1}$ ) based on standard curves from qPCR on serial dilutions of cDNA adipose tissue.  $k$  = The slope based on a plot of the number of quantification cycles versus the nucleic acid input level for each primer pair.  $R^2$  = The correlation coefficient of the line, accepted if  $\geq 0.985$ .

## Table S4. Weight gain, food intake, water intake, and BW for dams at PND22

**Table S4.** Weight gain, food intake, water intake, and body weight at PND22 for dams exposed to 0, 0.5 or 50  $\mu\text{g}$  BPA/kg BW/day

	[C] (n=14)	[0.5] (n=11)	[50] (n=9)	One-way ANOVA	Dunnett's post-hoc test
Weight gain (g)	48.7 $\pm$ 2.2	48.3 $\pm$ 3.4	40.3 $\pm$ 3.0	$p=0.09$	[C]-[0.5]: $p=1.0$ , C-[50]: $p=0.08$
Total food intake (g/week)	150.7 $\pm$ 2.0	145.6 $\pm$ 5.7	143.3 $\pm$ 3.9	$p=0.4$	[C]-[0.5]: $p=0.6$ , C-[50]: $p=0.3$
Food intake GD3.5-birth (g/week)	92.1 $\pm$ 1.4	96.2 $\pm$ 1.7	89.3 $\pm$ 3.9	$p=0.2^{\#}$	[C]-[0.5]: $p=0.4$ , C-[50]: $p=1.0$
Food intake birth-PND22 (g/week)	209.3 $\pm$ 3.5	195.0 $\pm$ 11.2	198.3 $\pm$ 6.3	$p=0.3$	[C]-[0.5]: $p=0.3$ , C-[50]: $p=0.4$
Total water intake (ml/day)	31.9 $\pm$ 0.9	28.6 $\pm$ 1.3	29.7 $\pm$ 0.7	$p=0.08$	[C]-[0.5]: $p=0.05$ , C-[50]: $p=0.3$
Water intake GD3.5-birth (ml/day)	22.2 $\pm$ 1.1	20.1 $\pm$ 0.6	20.0 $\pm$ 0.9	$p=0.1$	[C]-[0.5]: $p=0.2$ , C-[50]: $p=0.2$
Water intake birth-PND22 (ml/day)	41.1 $\pm$ 1.0	36.8 $\pm$ 2.7	39.1 $\pm$ 1.0	$p=0.2$	[C]-[0.5]: $p=0.1$ , C-[50]: $p=0.6$
Bodyweight (g)	197.6 $\pm$ 3.2	201.6 $\pm$ 3.1	198.8 $\pm$ 6.2	$p=0.8$	[C]-[0.5]: $p=0.7$ , C-[50]: $p=1.0$

<sup>#</sup>: Data not normally distributed and Kruskal-Wallis p-value and post hoc tests shown. Pups of one [0.5] dam was transferred to other [0.5] dams at PND4. Results are shown as mean  $\pm$  SEM

## Table S5. Number of pups and sex ratio

**Table S5.** Litter details.

Treatment	Dams without litters/total number of dams per dose group, Number and (%)	Number of pups/dam with pups, Mean and (Median)	Male pups/total number of pups (%)
[C]	4/18 (22.2)	7.1(8)	54
[0.5]	0/12 (0)	5.6 (6)	59
[50]	6/15 (40)	6.2 (5.5)	61
One-way ANOVA	$p=1.00$	$p=0.5$	$p=0.7$

Note: Dams without litters/total number of dams per dose group, number of pups per dam with pups and sex ratio of five-week-old male and female F344 rats developmentally exposed to BPA. [C]: Control, [0.5]: 0.5 µg BPA/kg bodyweight/day, [50]: 50 µg BPA/kg bodyweight/day.

## Table S6. Results for males and females combined

**Table S6.** Relationship between BPA and different parameters, sexes analyzed together.

	Number of animals	[C] (%)	[0.5] (% of [C]) ± SE	[50] (% of [C]) ± SE	Factorial ANOVA	One-way ANOVA	Dunnett's post-hoc test [C]-[0.5], [C]-[50]
Heart weight (g) <sup>a</sup>	[C]: n= 26 [0.5]: n=21 [50]: n=16	0.37 ± 0.008 <sup>a</sup>	0.35 ± 0.006 <sup>a</sup>	0.37 ± 0.01 <sup>a</sup>	<i>p</i> =0.9	<i>p</i> =0.04	[C]-[0.5]: <i>p</i> =0.03, C-[50]: <i>p</i> =0.9
HSI <sup>a#</sup>	[C]: n= 26 [0.5]: n=21 [50]: n=16	0.47 ± 0.008 <sup>a</sup>	0.44 ± 0.004 <sup>a</sup>	0.47 ± 0.01 <sup>a</sup>	<i>p</i> =0.6	<i>p</i> =0.008 <sup>#</sup>	[C]-[0.5]: <i>p</i> =0.03, C-[50]: <i>p</i> =0.9
ACC (gWAT)	[C]: n= 21 [0.5]: n=23 [50]: n=13	100	71.3 ± 5.3	78.8 ± 8.6	<i>p</i> =0.1	<i>p</i> =0.002	[C]-[0.5]: <i>p</i> =0.002, C-[50]: <i>p</i> =0.05
GATA2 (gWAT) <sup>#</sup>	[C]: n= 21 [0.5]: n=23 [50]: n=13	100	84.8 ± 8.2	139.8 ± 25.7	<i>p</i> =0.2	<i>p</i> =0.04	[C]-[0.5]: <i>p</i> =0.002, C-[50]: <i>p</i> =0.05
SREBP-1c (gWAT)	[C]: n= 21 [0.5]: n=23 [50]: n=13	100	74.2 ± 6.1	75.1 ± 7.1	<i>p</i> =0.8	<i>p</i> =0.002	[C]-[0.5]: <i>p</i> =0.3, C-[50]: <i>p</i> =0.8
Adiponectin (iscpBAT)	[C]: n= 26 [0.5]: n=21 [50]: n=16	100	110.4 ± 8.7	83.2 ± 3.4	<i>p</i> =0.8	<i>p</i> =0.02	[C]-[0.5]: <i>p</i> =0.4, C-[50]: <i>p</i> =0.1
Triglycerides (mmol/L)	[C]: n= 26 [0.5]: n=21 [50]: n=16	0.6 ± 0.02	0.8 ± 0.05	0.7 ± 0.05	<i>P</i> =0.1	<i>P</i> =0.001	[C]-[0.5]: <i>p</i> =0.0007, C-[50]: <i>p</i> =0.04
Plasma adiponectin (µg/ml) <sup>b</sup>	[C]: n= 26 [0.5]: n=20 [50]: n=16	9.3 ± 0.5	11.5 ± 1.0	11.5 ± 1.0	<i>p</i> =0.8	<i>p</i> =0.09	[C]-[0.5]: <i>p</i> =0.1, C-[50]: <i>p</i> =0.1
Weaning BW (g)	[C]: n= 26 [0.5]: n=21 [50]: n=16	39.8 ± 0.7	38.2 ± 0.7	37.4 ± 0.9	<i>P</i> =0.8	<i>P</i> =0.9	[C]-[0.5]: <i>p</i> =0.4, C-[50]: <i>p</i> =0.06

Final BW (g)	[C]: n= 26 [0.5]: n=21 [50]: n=16	78.9 ± 1.1	78.1 ± 1.5	78.9 ± 2.1	<i>P</i> =0.7	<i>P</i> =0.9	[C]-[0.5]: <i>p</i> =0.9, C-[50]: <i>p</i> =1.0
Weight gain, week 3 - 5 (g)	[C]: n= 26 [0.5]: n=21 [50]: n=16	39.1 ± 0.7	39.6 ± 1.1	41.6 ± 1.7	<i>P</i> =0.2	<i>P</i> =0.3	[C]-[0.5]: <i>p</i> =0.9, C-[50]: <i>p</i> =0.2
Gonadal fat pad (g)	[C]: n= 26 [0.5]: n=21 [50]: n=16	0.06 ± 0.006	0.07 ± 0.008	0.07 ± 0.07	<i>P</i> =0.8	<i>P</i> =0.7	[C]-[0.5]: <i>p</i> =0.8, C-[50]: <i>p</i> =0.7
Inguinal fat pad (g)	[C]: n= 26 [0.5]: n=21 [50]: n=16	0.3 ± 0.01	0.4 ± 0.02	0.3 ± 0.02	<i>P</i> =0.6	<i>P</i> =0.8	[C]-[0.5]: <i>p</i> =0.8, C-[50]: <i>p</i> =1.0
Retroperitoneal fat pad (g)	[C]: n= 26 [0.5]: n=21 [50]: n=16	0.07 ± 0.006	0.08 ± 0.006	0.06 ± 0.008	<i>P</i> =0.7	<i>P</i> =0.3	[C]-[0.5]: <i>p</i> =0.3, C-[50]: <i>p</i> =0.5
Interscapular WAT (g)	[C]: n= 26 [0.5]: n=21 [50]: n=16	0.1 ± 0.03	0.1 ± 0.007	0.08 ± 0.01	<i>P</i> =0.5	<i>P</i> =0.5	[C]-[0.5]: <i>p</i> =0.9, C-[50]: <i>p</i> =0.4
Interscapular BAT (g)	[C]: n= 26 [0.5]: n=21 [50]: n=16	0.2 ± 0.006	0.2 ± 0.009	0.2 ± 0.01	<i>P</i> =0.5	<i>P</i> =0.7	[C]-[0.5]: <i>p</i> =0.9, C-[50]: <i>p</i> =0.9
Spleen (g)	[C]: n= 26 [0.5]: n=21 [50]: n=16	0.2 ± 0.004	0.2 ± 0.005	0.2 ± 0.007	<i>P</i> =1.0	<i>P</i> =0.2	[C]-[0.5]: <i>p</i> =0.1, C-[50]: <i>p</i> =0.7
Liver weight (g)	[C]: n= 26 [0.5]: n=21 [50]: n=16	3.3 ± 0.06	3.3 ± 0.09	3.2 ± 0.1	<i>P</i> =0.5	<i>P</i> =0.9	[C]-[0.5]: <i>p</i> =0.9, C-[50]: <i>p</i> =1.0
LSI	[C]: n= 26 [0.5]: n=21 [50]: n=16	4.4 ± 0.04	4.2 ± 0.05	4.1 ± 0.06	<i>P</i> =0.5	<i>P</i> =0.3	[C]-[0.5]: <i>p</i> =0.5, C-[50]: <i>p</i> =0.8
Liver fat (%)	[C]: n= 26 [0.5]: n=21 [50]: n=16	0.08 ± 0.01	0.09 ± 0.02	0.08 ± 0.02	<i>P</i> =0.8	<i>P</i> =1.0	[C]-[0.5]: <i>p</i> =1.0, C-[50]: <i>p</i> =1.0
Body length (cm)	[C]: n= 26 [0.5]: n=21 [50]: n=16	15.1 ± 0.1	15.2 ± 0.1	15.1 ± 0.2	<i>P</i> =0.7	<i>P</i> =0.9	[C]-[0.5]: <i>p</i> =1.0, C-[50]: <i>p</i> =0.9

AGD (mm)	[C]: n= 26 [0.5]: n=21 [50]: n=16	11.9 ± 0.6	12.3 ± 0.6	12.3 ± 0.7	<i>P</i> =0.8	<i>P</i> =0.9	[C]-[0.5]: <i>p</i> =0.9, C-[50]: <i>p</i> =0.9
AGDi (mm/ <sup>3</sup> √g BW)	[C]: n= 26 [0.5]: n=21 [50]: n=16	0.2 ± 0.007	0.2 ± 0.007	0.2 ± 0.008	<i>P</i> =0.9	<i>P</i> =0.8	[C]-[0.5]: <i>p</i> =0.8, C-[50]: <i>p</i> =0.8
HDL (mmol/L)	[C]: n= 26 [0.5]: n=21 [50]: n=16	0.8 ± 0.02	0.8 ± 0.02	0.8 ± 0.02	<i>P</i> =0.2	<i>P</i> =0.3	[C]-[0.5]: <i>p</i> =0.2, C-[50]: <i>p</i> =0.3
LDL (mmol/L)	[C]: n= 26 [0.5]: n=21 [50]: n=16	0.2 ± 0.005	0.2 ± 0.007	0.2 ± 0.007	<i>P</i> =0.7	<i>P</i> =0.6	[C]-[0.5]: <i>p</i> =0.7, C-[50]: <i>p</i> =0.9
Total cholesterol (mmol/L)	[C]: n= 26 [0.5]: n=21 [50]: n=16	2.6 ± 0.07	2.8 ± 0.05	2.7 ± 0.06	<i>P</i> =0.08	<i>P</i> =0.1	[C]-[0.5]: <i>p</i> =0.08, C-[50]: <i>p</i> =0.4
Plasma leptin (ng/mL)	[C]: n= 26 [0.5]: n=20 [50]: n=16	0.6 ± 0.4	0.7 ± 0.3	0.7 ± 0.5	<i>P</i> =0.5	<i>P</i> =0.3	[C]-[0.5]: <i>p</i> =0.2, C-[50]: <i>p</i> =0.4
Gonadal WAT (number of cells/HPF)	[C]: n= 4 [0.5]: n=4 [50]: n=4	81.8 ± 5.4	87.0 ± 3.5	83.3 ± 3.2	<i>P</i> =0.6	<i>P</i> =0.7	[C]-[0.5]: <i>p</i> =0.6, C-[50]: <i>p</i> =0.9
Interscapular BAT (number of cells/HPF)	[C]: n= 4 [0.5]: n=4 [50]: n=4	119.3 ± 9.1	137.9 ± 11.7	121.2 ± 6.7	<i>P</i> =0.6	<i>P</i> =0.3	[C]-[0.5]: <i>p</i> =0.3, C-[50]: <i>p</i> =1.0

Note: Sexes were analyzed together since no significant interaction was seen between sex and BPA dose for these relationships (Factorial ANOVA (Interaction term) *p*>0.05). #: Data not normally distributed and Kruskal-Wallis *p*-value and post hoc tests shown, <sup>a</sup>: Values are reported as mean ± SEM, gWAT: Gonadal white adipose tissue, HPF: High power field, iscpBAT: Interscapular brown adipose tissue, SEM: Standard error of the mean

## Table S7. Number of cells per high power field in adipose tissue

**Table S7.** Number of adipocytes per high power field in iWAT, gWAT and iscpBAT of rat offspring.

Adipose tissue depot	Number of animals	Females				Males			
		Control	[0.5]	[50]	ANOVA <i>p</i> -value	Control	[0.5]	[50]	ANOVA <i>p</i> -value
iWAT	[C]: n= 6 [0.5]: n=6 [50]: n=6	55.9 ± 1.5	68.2 ± 4.4 <sup>a</sup>	55.3 ± 2.9 <sup>bc</sup>	0.02	57.3 ± 2.5	54.0 ± 3.4 <sup>d</sup>	69.9 ± 5.1 <sup>ef</sup>	0.02
gWAT	[C]: n= 4 [0.5]: n=4 [50]: n=4	78.2 ± 1.0	83.4 ± 1.0 <sup>g</sup>	84.8 ± 1.0 <sup>hi</sup>	0.9 <sup>#</sup>	85.3 ± 5.0	90.5 ± 6.8 <sup>j</sup>	81.8 ± 2.8 <sup>kl</sup>	0.5
IscpBAT	[C]: n= 4 [0.5]: n=4 [50]: n=4	129.6 ± 14.1	137.5 ± 9.3 <sup>m</sup>	118.9 ± 9.5 <sup>no</sup>	0.5	108.9 ± 10.9	138.3 ± 23.4 <sup>p</sup>	123.6 ± 10.7 <sup>qr</sup>	0.6 <sup>#</sup>

<sup>#</sup>: Data not normally distributed and Kruskal-Wallis *p*-value and post hoc tests shown, <sup>a</sup>: [C]-[0.5]: *p*=0.03, <sup>b</sup>: [C]-[50]: *p*=1.0, <sup>c</sup>: [0.5]-[50]: *p*=0.04, <sup>d</sup>: [C]-[0.5]: *p*=1.0, <sup>e</sup>: [C]-[50]: *p*=0.1, <sup>f</sup>: [0.5]-[50]: *p*=0.03, <sup>g</sup>: [C]-[0.5]: *p*=1.0, <sup>h</sup>: [C]-[50]: *p*=1.0, <sup>i</sup>: [0.5]-[50]: *p*=1.0, <sup>j</sup>: [C]-[0.5]: *p*=1.0, <sup>k</sup>: [C]-[50]: *p*=1.0, <sup>l</sup>: [0.5]-[50]: *p*=0.8, <sup>m</sup>: [C]-[0.5]: *p*=1.0, <sup>n</sup>: [C]-[50]: *p*=1.0, <sup>o</sup>: [0.5]-[50]: *p*=0.8, <sup>p</sup>: [C]-[0.5]: *p*=0.8, <sup>q</sup>: [C]-[50]: *p*=1.0, <sup>r</sup>: [0.5]-[50]: *p*=1.0, iscpBAT: interscapular brown adipose tissue, WAT: White adipose tissue. Results are shown as mean ± SEM.

## Table S8. Primary analysis: Transcriptional levels in adipose tissue and liver

**Table S8.** Transcriptional levels in adipose tissue and liver with one-way ANOVA and post hoc tests.

	Sex	[0.5] (n=10-11) (% of [C]) ± SEM	[50] (n=5-10) (% of [C]) ± SEM	One-way ANOVA	Dunnett's post-hoc test [C]-[0.5], [C]-[50]
<i>ACC</i> (gWAT)	M	71.6 ± 7.1	65.3 ± 10.6	<i>p</i> =0.003	[C]-[0.5]: <i>p</i> =0.011, [C]-[50]: <i>p</i> =0.005
<i>AdipoR2</i> (gWAT)	M	76.5 ± 7.7	73.5 ± 10.0	<i>p</i> =0.022	[C]-[0.5]: <i>p</i> =0.039, [C]-[50]: <i>p</i> =0.034
<i>LPL</i> (gWAT)	M	79.9 ± 6.7	76.1 ± 11.4	<i>p</i> =0.047	[C]-[0.5]: <i>p</i> =0.073, [C]-[50]: <i>p</i> =0.061
<i>SCD1</i> (gWAT)	M	77.7 ± 8.8	63.5 ± 11.4	<i>p</i> =0.031	[C]-[50]: <i>p</i> =0.022, [C]-[50]: <i>p</i> =0.14
<i>GATA2</i> (gWAT)	M	66.5 ± 7.5	152.7 ± 41.9	<i>p</i> =0.023	[C]-[50]: <i>p</i> =0.35, [C]-[50]: <i>p</i> =0.13
<i>AdipoR1</i> (iWAT)	M	63.5 ± 6.9	82.7 ± 7.6	<i>p</i> =0.040	[C]-[0.5]: <i>p</i> =0.036, [C]-[50]: <i>p</i> =0.091
<i>SCD1</i> (iWAT)	M	63.7 ± 11.1	71.4 ± 9.7	<i>p</i> =0.018	[C]-[0.5]: <i>p</i> =0.015, [C]-[50]: <i>p</i> =0.059
<i>CEBPα</i> (Liver)	M	88.5 ± 5.6	74.9 ± 4.8	<i>p</i> =0.040	[C]-[0.5]: <i>p</i> =0.35, [C]-[50]: <i>p</i> =0.023
<i>AdipoR1</i> (gWAT)	F	99.5 ± 4.1	130.9 ± 4.2	<i>p</i> =0.0001	[C]-[50]: <i>p</i> =0.0001, [C]-[50]: <i>p</i> =0.99
<i>SCD1</i> (gWAT)	F	65.1 ± 9.5	115.6 ± 13.0	<i>p</i> =0.032	[C]-[50]: <i>p</i> =0.075, [C]-[50]: <i>p</i> =0.66
<i>SREBP-1c</i> (gWAT)	F	73.8 ± 6.5	77.9 ± 4.4	<i>p</i> =0.022	[C]-[0.5]: <i>p</i> =0.016, [C]-[50]: <i>p</i> =0.11

Note: Non-significant results are not shown. *ACC*: acetyl-CoA carboxylase, *AdipoR*: Adiponectin receptor (1 and 2), *CEBP-α*: CAAT enhancer binding protein alpha, F: Females, gWAT: Gonadal white adipose tissue, *GATA2*: binding protein 2, iWAT: Inguinal white adipose tissue, *LPL*: Lipoprotein lipase, M: Males, *SCD1*: Stearoyl-CoA Desaturase, SEM, Standard error of the mean, *SREBP-1c*: Sterol regulatory element binding protein-1c.